

# **Transportation Planning Academy Caltrans HQ Sacramento, CA**

**Gary Cathey, Chief  
Division of Aeronautics**

**May 16, 2017**



# Aeronautics' Presentation

- Developing a new perception of aviation in California
- What is the role of the Division of Aeronautics?
- How Caltrans Transportation Planning Programs can integrate aviation
- Redefine the role of a *Multimodal* Transportation Planner

## Objectives:

- Increase awareness of aviation, beyond the airport runway and passenger jet
- Define the various programs that should continuously integrate aviation
- Explain Your Role as a *multi-modal* Transportation Planner



# Changing Perceptions

## *Airports are regional economic engines!*

- Aircraft are flown to regional community *aviation commerce centers*, more commonly known as airports, which come in all shapes & sizes
- Airports are mixed-use development centers, or *multi-functional hubs* for conducting business, commerce, and transportation
- **Time for a short video...** [https://youtu.be/OwjO\\_gNYYaA](https://youtu.be/OwjO_gNYYaA)



# Why Aviation is Important to California

## Aviation is vital for California!

- Provides for commerce centers that are vital for the movement of goods and people to and from markets
- Contributes nearly 5 percent of the U.S. employment and output – direct and indirect spending:
  - Contribution to the U.S. Gross Domestic Product: **\$168.7 billion** (4.7 percent)
  - Contribution to the U.S. employment: **1.2 million jobs** (5.5 percent)
  - **59,213** active licensed pilot community (10 percent of U.S. total)
  - **29,738** registered aircraft (10 percent of U.S. total)





# Why Aviation is Important to California

(cont'd)

- Airports facilitate international and domestic trade
- They are necessary for “just-in-time” production and delivery
- Each airport is an essential component of the State’s emergency response and disaster recovery operations
- Aviation provides convenient and affordable air travel for tourists, as well as access for companies to conduct business in your local community



# Defining the Role of Aeronautics

## Federal Aviation Administration (FAA):

- Regulate airspace, airport security, airlines, aircraft, pilots, and aircraft mechanics
- Manage FAA Airport Improvement Program (AIP) funding grants for National Plan of Integrated Airport Systems (NPIAS)
- Certify and perform safety compliance inspections of Part 139 Commercial Service Airports

## State of California (Caltrans):

- Issue airport and heliport permits and conduct permit compliance safety inspections
- Provide airport sponsors grants and loans in support of General Aviation airports from the California Aid to Airports Program (CAAP)
- Provide technical expertise in the areas of engineering, land use, aircraft noise, environment and compatible land use planning related to aviation
- Site evaluation of proposed state buildings, public schools and community colleges

## Airport Sponsor:

- Facility Owner/Operator
- Maintenance
- Provide local matching funds for FAA AIP grants
- Provide for operational airport safety



# State, Federal, and Other Aviation Partners

## State:

- Department of Education (DOE)
- Department of Fish and Game (DF&G)
- California Energy Commission (CEC)
- Governor's Office of Planning and Research (OPR)
- Governor's Office of Emergency Services (OES)

## Federal:

- Federal Aviation Administration (FAA)
- U.S. Department of Defense (DOD)
- U.S. Department of Agriculture (USDA) – Wildlife Services
- U.S. Department of Transportation (USDOT)

## Private Non-Government Organizations:

- National Association of State Aviation Officials (NASAO)
- American Association of Airport Executives (AAAE)
- Airport Cooperative Research Program (ACRP), Transportation Research Board (TRB)
- National Business Aircraft Association (NBAA)
- Airplane Owners & Pilots Association (AOPA)
- Association of California Airports (ACA)
- California Airports Council (CAC)
- California Pilots Association (CPA)



# Division of Aeronautics - Mission and Goals

- Foster development to improve the California air transportation system throughout the State
- Promote aviation safety while preserving the environment
- Introduce context-sensitive, sustainable solutions to promote aviation safety and to increase system capacity





# Division Overview

## Aeronautics Offices and Specialty Areas:

- Office of Airports
- Office of Aviation Planning
- Office of Technical Services & Programs
- Other Specialty Areas:
  - Funding for Airport Grants & Loans
  - Aviation Noise
  - Environmental Review/CEQA Compliance
  - Aviation Legislation & Information





# DIVISION OF AERONAUTICS

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*Provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability.*

May 2017



# Division Core Functions

## Aeronautics' General Functions and Responsibilities:

- Land Use Compatibility, Environmental and System Planning, Airport Safety Compliance Inspections, Airport Project Funding & Engineering, and Aircraft Noise. Manage one loan and three grant programs

## Oversee safety at 667 permitted aeronautical facilities:

- 244 Public-use airports (26 commercial service & 218 general aviation)
- 68 Special-use airports
- 355 heliports (168 hospital heliports, 187 police, fire, corporate, commuter or privately owned heliports)
- Exempt aviation facilities: 6 seaplane bases, 22 military airfields, and 1 joint-use MIL/CIV airport

## Leverage Federal Aviation Administration (FAA) Airport Improvement Plan (AIP) Grants with State AIP Matching Grants

- FAA AIP Grants pay up to 95 percent of project cost (\$262.2 million, FFY 2015/16)
- State AIP Matching Grants pay 5.0 percent of the federal AIP Grants for eligible airports (\$1.79 million FY 2015/16)

## Provide airport sponsors aeronautical expertise and technical assistance

- Planner, engineer and inspector teams are integral to addressing the State's aviation issues





## DIVISION OF AERONAUTICS

### Functional Organization Chart

April 2017



**GARY CATHEY, Chief**  
(916) 654-5470

**Office of Airports**  
Jeff Brown, Chief  
(916) 654-4565

- Conduct public use airport/heliport and hospital heliport safety and permit compliance inspections
- Under Federal Aviation Administration contract, conduct inspections and update Airport Master Records for specified public-use airports
- Review and assess new, amended, and corrected airport/heliport permit applications, including plans check/approval, site visits, final permit inspections, and issuing of permits
- Evaluate proposed K-12 School, Community College, and State building sites within two nautical miles of an airport
- Manage the Helicopter Landing Authorization program for evaluation and authorization of helicopter landings within 1,000 feet of K-12 schools
- Host and maintain the hospital heliport dataplates information system
- Oversee development of and updates to the California aeronautical chart
- Work with federal, State, and local agencies on facility, airspace, and other aviation matters
- Assist and guide current and prospective airport/heliport owners, managers, and consultants with permitting, regulatory, and other aviation issues
- Respond to State aeronautics-related requests and questions from the public

**Office of Aviation Planning**  
Ron Bolyard, Chief  
(916) 654-7075

- Develop State aviation planning policies and participate in the development of federal planning policies
- Participate in intermodal planning and regional aviation system planning with cities, counties, MPOs, RTPAs and various Caltrans Divisions and Districts statewide
- Review, comment on, and develop guidelines for aviation-related activities in MPOs and RTPAs Regional Transportation Plans, Overall Work Programs, and cities' and counties' airport master plans
- Update the California Aviation System Plan; develop and publish the California Airport Land Use Planning Handbook; review and comment on Airport Land Use Compatibility Plans, and related city and county land use decision overrides
- Analyze aviation's influence on the State's economy
- Aviation liaison for Caltrans Divisions including aviation-related research activities, transportation information, and goods movement
- Pursue State and federal grants to facilitate aviation system advancement
- Collect and publish aviation statistics
- Analyze and monitor federal and State aviation legislation
- Emergency Management Support

**Office of Technical Services and Programs**  
Tarek Tabshouri, Chief  
(916) 654-3775

- Develop the statewide Capital Improvement Plan (CIP) for aviation needs and provide airport sponsor guidance
- Prepare and manage the State Aeronautics Program
- Provide engineering assistance to local governments on airport capital improvement projects under the California Aid to Airports Program
- Review or manage State general aviation loans and Acquisition and Development grants
- Develop and manage federal grant contracts awarded from the Federal Aviation Administration Airport Improvement Program to support general aviation
- Manage the AirportIQ System Management database and provide technical assistance to airport sponsors to update airport CIP project lists
- Conduct public meeting to share information with the stakeholder groups in conjunction with the Federal Aviation Administration, the Association of California Airports, and others
- Evaluate land use compatibility and proposed school sites near airports by developing site specific maps using AutoCAD
- Maintain and update the Airport Pavement Management System that identifies needs and estimates capital outlay costs

**Resource Management**  
SANAZ JAVADINEJAD  
Resource Manager  
(916) 654-4389

- Administer operating and capital budgets
- Administrative and personnel support

**Grants and Loans**  
SHANNON MONTANO  
(916) 654-4718

- Manage grants and loans to airports for capital improvement projects
- California Transportation Commission Liaison

**Airport Noise Program and Environmental Review**  
PHILIP CRIMMINS  
(916) 654-6223

- Administer California airport noise regulations
- Review and comment on environmental documents for airport related local developments

*Provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability.*



# Office of Airports





# Office of Airports

- Perform periodic safety inspections for public-use airports and hospital heliports
- Implement State and federal airport design standards related to marking, lighting, signage, safety areas, and obstruction clearance criteria
- Provide technical assistance and guidance to sponsors, other aviation interests, and the public
- Coordinate with the FAA and other federal, State, and local government agencies



# Office of Airports

- Carry out PUC required permit actions:
  - Permitting public-use and special-use airports and heliports in CA. Evaluate & review plans, sites, CEQA, local govt approval (issue/revise ~30 permits/yr)
  - Evaluate proposed school, community college, and State building sites within 2 miles of an airport (~25/year)
  - Evaluate and authorize helicopter landings at and within 1,000 feet of K-12 schools (~250/year)
- Conduct Airport Master Record inspections and updates under contract with the FAA
- Review FAA Airspace Obstruction Evaluation cases for potential impact on airports

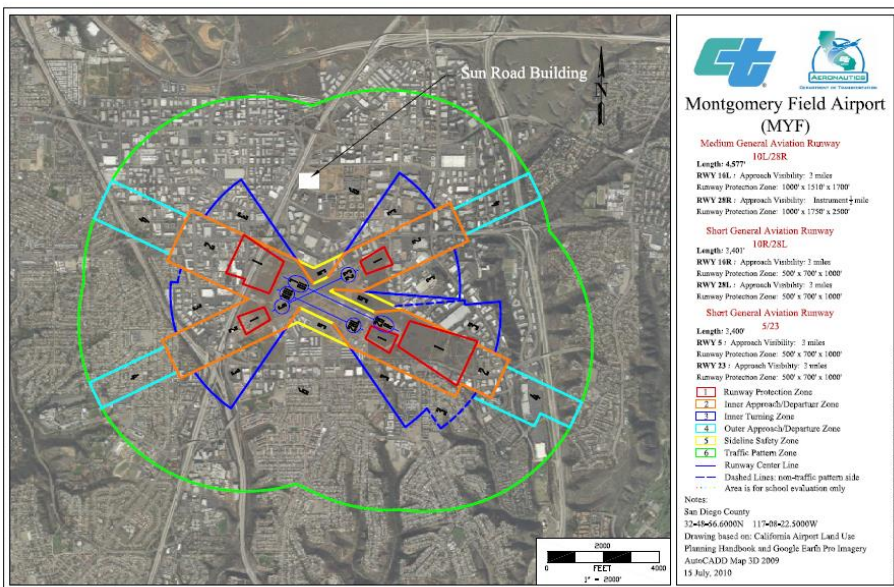


# State Buildings and School Site Evaluations

## - Airport Safety Compatibility Zones

The Division of Aeronautics is required to evaluate these sites within two nautical miles of an existing or proposed runway:

- Proposed K–12 schools – Education Code, section 17215
- Proposed Community Colleges – Education Code, section 81033
- Proposed State Buildings – Public Utilities Code, section 21655



### Planning:

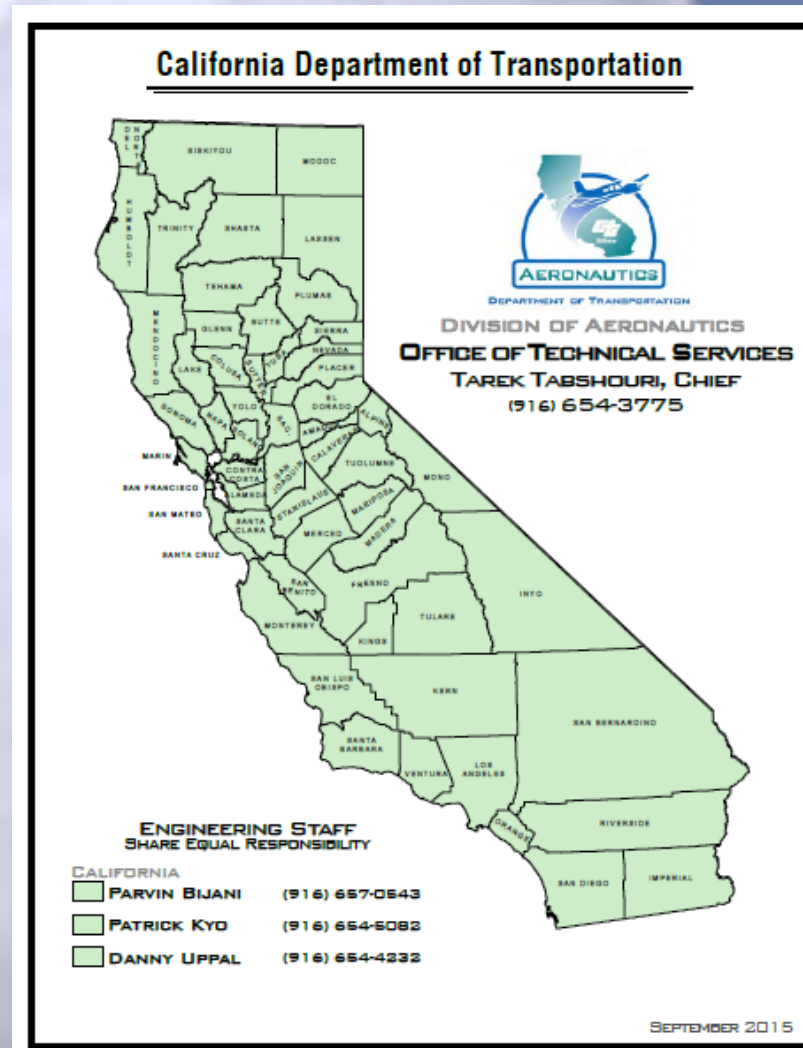
- Solicits input from airport sponsor and Airport Land Use Commission staff.
- Consider overall community planning consistent with adopted Airport Land Use Compatibility Plans
- Reference guidance from the California Airport Land Use Planning Handbook

### Why?

To minimize disruptive noise and provide for adequate safety for new developments



# Office of Technical Services & Programs



# Office of Technical Services & Programs

- Provide engineering assistance (internal and external partners)
- Develop the 2-year Capital Improvement Plan (CIP)
- Review and manage State Acquisition & Development (A&D) grants & 3-year Aeronautics Program
- Prepare School Site Evaluation Maps, Land Use Incompatibility Maps, and AutoCAD drawings for airports
- FAA Contract Administration and Management (e.g. Asphalt Pavement Management System)
- Manage Caltrans Airport Projects from Programming to Construction Close-out





# Airport Funding

## ➤ State Aeronautics Account

- Annual revenue approximately \$6.0 million from aviation fuel excise taxes (Avgas 18¢/gal. and Jet fuel 2¢/gal., excludes commercial jet fuel sales)

## ➤ California Aid to Airports Program (CAAP)

1. Annual Credit Grant: \$10,000/year to 149 GA airports (\$1.49 million) – 100% State funded grant
2. Airport Improvement Program (AIP) Matching Grants (\$1.8 million) – 5% State funded grant (FAA pays 90% and airport pays approx. 5%)
3. Acquisition and Development (A&D) Grants (\$2.48 million) – 90% State funded safety, pavement preservation projects, and **Airport Land Use Compatibility Plans** (requires a 10% local match)

## ➤ Airport Loan Program (low interest loans, current rate = 2.88% APR)

- For revenue generating projects (e.g. hangar construction and aviation fuel facilities)

## ➤ *State Dollars for Your Airport* – Go to this Aeronautics website:

[http://www.dot.ca.gov/hq/planning/aeronaut/documents/grants\\_and\\_loans/StateDollarsForAirport.pdf](http://www.dot.ca.gov/hq/planning/aeronaut/documents/grants_and_loans/StateDollarsForAirport.pdf)



# Operational Safety Discrepancy Resolution

## Pavement Condition Index: Very Poor (18)



## California Pines Airport, Modoc County



## Result:

*Safer and Smoother landings and take-offs!*



## Runway Rehabilitation Project Description:

- Pulverized, reshaped, graded, and compacted into sub-base
- Widened 4,250' runway to 60 feet, including a 2.5" hot-mix asphalt overlay and new runway markings

# Aircraft Noise

- Since 1969, the Public Utilities Code (PUC) mandates mitigation of aircraft noise at airports to resolve existing noise problems and prevent the development of new problems
- County government determines which airports must meet noise standards
  - 10 airports statewide (9 air carrier and 1 general aviation)
- Department noise activities include:
  - Review and approval of aircraft monitoring plans
  - Assess airports' progress toward achieving standards
  - Consider applications for a variance from standards

For more information, please visit the Aviation Noise Program website:

<http://www.dot.ca.gov/hq/planning/aeronaut/avnoise.htm>



# Aviation & Environmental Review

Review projects submitted from State Clearinghouse (IGR/CEQA)

- Analyze project from an aviation perspective and comment on potential environmental impacts, such as effects relating to aircraft flight, aircraft noise, and public safety

*How you can help Aeronautics identify potential impacts to aviation?*

**Contact us with your concerns whenever you think there might be an environmental issue within 2-nautical miles of an airport!**

**POC: Philip Crimmins, Environmental Review  
(916) 654-6223**



# Office of Aviation Planning

## Work Products:

- California Aviation System Plan (CASP) Policy Element (2016)
- Public Use Airports and Military Airfields Map (2016)
- California Airport Land Use Planning Handbook (2011)
- CASP General Aviation System Needs Assessment (2010)
- California General Aviation Airports: Links to Vitality (DVD - 2008)





# Compatible Land Use Development





# Incompatible Land Use Development



# Where Aviation should be considered: Advance Planning Programs

- California Transportation Plan
- California Interregional Blueprint
- Climate Action and Adaptation Program
- Smart Mobility Framework
- Complete Streets
- Regional Blueprint Plan / Sustainable Communities Strategies
- Project Initiation Documents (PIDs)



**Smart Mobility  
FRAMEWORK**



# Where Aviation should be considered: Advance Planning Programs (cont'd)

- Highway Planning and Design
- Regional Transportation Plans and Overall Work Programs
- Transit Connectivity
- Local Development – Intergovernmental review (LD-IGR)
- Public Participation
- Goods/Freight Movement
- Public Private Partnerships Program

## General Reminder:

No Aeronautics representatives are in any Caltrans districts, so please forward all aviation/airport issues to HQ!





# Role of Transportation Planners

## Caltrans has no Aviation Planners in the Districts

- Airport Land Use Commissions serve as the State's primary aviation land use planners, whose actions protect pilots, airports, and the surrounding communities
- You are the “first responders” for protecting and promoting aviation statewide, through Caltrans planning!

## Know Your Role as a Caltrans Planner

- Know when a development might impact an airport, such as a wind farm or a major surface transportation project (Reference: Highway Design Manual p. 207)
- If a project lies within 2 nautical miles of an airport, Alert the Division of Aeronautics
- Do not assume the role of an Airport Land Use Commission (ALUC)
- Airport Land Use Compatibility Plans (ALUCP) out rank General Plans or Regional Transportation Plans, and GP and RTP must be consistent with the ALUCP



# Aviation Planning Update

- Airport Pavement Management System Plan (2017)
  - 80 + airport pavement study - 90% FAA funded.
  - Goal is to understand pavement conditions statewide and prioritize pavement maintenance and rehab projects system-wide. \$1.5M
  
- California Aviation System Plan (CASP) Update (2018)
  - Update and modernize the CASP - 90% FAA funded. \$350K
  
- Aviation Economic Study (2018-2019)
  - Assess current role aviation contributes to California's economy and project future trends. \$ - TBD



# Caltrans Unmanned Aircraft Systems

## ➤ Unmanned Aircraft System (UAS):

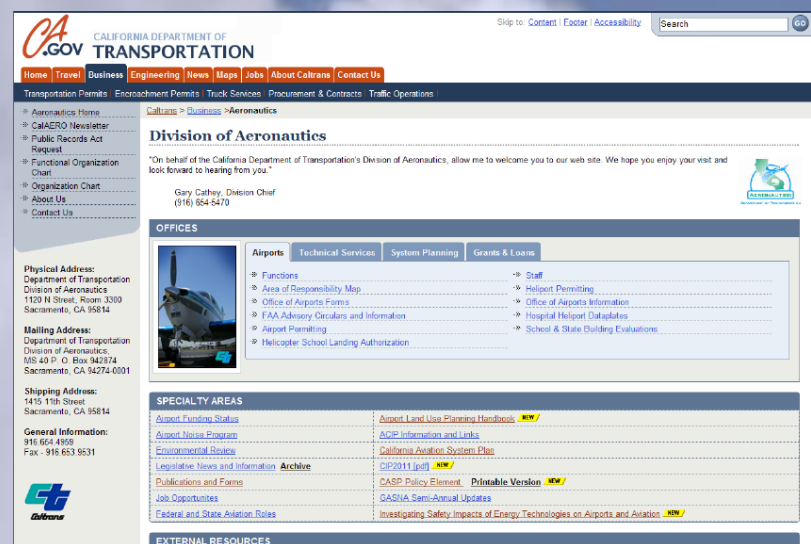
- Unmanned Vehicle
- Console
- System of communication (signal) between them
- UAS Operator (pilot) must be certified by FAA
- UAS must be registered with FAA



## ➤ Caltrans UAS Applications include:

- Surveying/Topographic maps
- Construction monitoring
- Bridge inspection
- Environmental studies
- Public Information
- Document slides & emergency incidents

*Your aviation planning resources are only a click away!*



[www.dot.ca.gov/aeronautics](http://www.dot.ca.gov/aeronautics)

